Mr. David Orth

General Manager
Kings River Conservation District

Testimony
Before the Committee on Resources
Subcommittee on Water and Power
United States House of Representatives

Oversight Field Hearing
June 11, 2005

The Economic and Environmental Benefits of New Water Storage in the San Joaquin Valley

Chairman Radanovich and members of the Subcommittee, my name is David Orth. I am the General Manager of the Kings River Conservation District. I would like to thank you for the opportunity to testify to you about exciting developments centered around regional water resource planning in the Kings River service area and how it relates to the economic and environmental benefits of new water storage in the San Joaquin Valley to the state and nation.

Background

The Kings River is the source of life for a rapidly growing region in Central California that is also part of the world's most productive agricultural area. The Kings River's water development history has been one of steady and tenacious advancement against a backdrop of difficult physical and legal challenges that out of necessity had to be overcome for progress to occur.

One such important example of forward movement was establishment of the Kings River Water Association (KRWA). Consisting of 28 locally operated public districts and mutual water companies, the KRWA administers all of the water flowing in the Kings River. Since 1927, the Association has allocated and administered water distribution for over 1.1 million acres of farmland and urban areas within the Kings River service area.

Pine Flat Dam and the 1,000,000 acre-feet of storage it provides makes possible the use of the Kings River water for irrigation in a more beneficial and convenient manner than was possible prior to its construction. The dam has also proven to be a successful and effective flood management tool. The runoff from the Kings River fluctuates greatly, ranging from a high of almost 4.5 million acre-feet to a low of 390,000 acre-feet, with an average annual runoff of 1,745,000 acre-feet. Flood releases from Pine Flat Dam since it began operations in 1954 have ranged from 9,700 acre-feet to 2,302,110 acre-feet. The Dam also creates storage essential for clean renewable hydropower generation at the Jeff L. Taylor Pine Flat Power Plant.

In 1951, the KRWA and other river stakeholders took steps to secure the natural resources in the San Joaquin Valley by obtaining special legislation to form the Kings River Conservation District (KRCD). Today, KRCD is a leading resource management agency for the Kings River region serving agriculture, business and residential communities within 1.2 million acres spanning portions of Fresno, Kings and Tulare counties, three of the top agricultural producing counties in the nation. The mission of KRCD is to provide flood protection, cooperate with other agencies achieve a balanced and high quality water supply, and develop power resources in the Kings River area for the public good.

Irrigated agriculture is the mainstay of the economic well being of the Central Valley. Agriculture provides nearly 20 percent of jobs in the Central Valley and plays a vital role in California's economy, with a value of more than $30 billion. California agriculture contributes positively to the U.S. balance of trade payments leading in agricultural exports. California ships more than $6.5 billion in agricultural products around the world. Agriculture is a major component of the economy of the Central Valley and a critical part of the state's economy and the nation's food supply. The rich soil and moderate climate are important factors contributing to the bounty of the Valley, but water is the true lifeblood.

Nearly a million people live within the Kings River service area. Nearly three-dozen cities, towns and villages depend upon groundwater conjunctively used and obtained from Kings River surface supplies to meet their municipal and industrial water needs. At the same time, the valley's population is rapidly growing and the demand for additional water is increasing. The population

of the Central Valley is expected to grow 24 percent between 2000 and 2010, making it the fastest growing region in California. A growth rate of this magnitude creates substantial pressure on our water and power resources.

Meeting this demand is challenging, and must occur by increased efforts to efficiently and effectively manage our existing resources. As a resource agency that provides support to the many entities that manage the water on the Kings River, KRCD has become involved in numerous regional efforts with the goal of providing a balanced and high quality water supply in an environmentally sensitive manner to the residents and water users within the Kings River region.

Many studies and preliminary assessments of possible water supply enhancement projects for the Kings River service area have been conducted by KRCD over the years. Potential storage projects, such as Rodgers Crossing and Dinkey Creek, were examined in past years for the benefits each might yield in the way of increased water supply, storage capacity and hydroelectric generation. No such project has been developed.

Even before KRCD was formed and Pine Flat Dam was built, water storage was part of resource planning in the Kings River service area. The earliest groundwater recharge basins began to be developed in the 1930s as a means of taking advantage of river flows well in excess of irrigation needs. From those early beginnings, the effort has expanded to numerous programs in water storage, recharge and quality through the coordinated effort of the thirty-seven agencies that have a role in the Kings River's water resources.

Overdraft of the groundwater resource is the primary problem to be addressed in the Kings River Basin. Overdraft is evidenced by declining groundwater levels, increased pumping costs, and loss of groundwater supply in some areas. Overdraft increases competition for the available supply and creates conflicts between agricultural, environmental and urban water users, and between geographic areas within the region. Declining groundwater levels and groundwater migration across jurisdictional boundaries are also a potential source of increased conflict.

Within the Kings River region, there are over 5,000 acres of recharge ponds and flood control basins with the capacity of recharging over 100,000 acre-feet of water annually, along with several thousands of miles of unlined canals that have direct recharge benefits. One of the oldest direct recharge programs is Consolidated Irrigation District's (CID) recharge program in the Selma and Kingsburg areas. A San Joaquin Valley pioneer in groundwater management, CID began its recharge program by acquiring its first percolation basin in 1932. An initial plan of sixteen ponds eventually grew to forty-six basins covering 1,300 acres located in the sandy soils of the Kings River's alluvial plain. South of the river, the Kings County Water District maintains 1,600 acres of groundwater recharge facilities and is developing a new water-banking project at Apex Ranch, in the Old Kings River channel south of Kingsburg. Other Kings River units have developed a number of groundwater recharge basins.

The Cities of Fresno and Clovis, the Fresno Metropolitan Flood Control District and the Fresno Irrigation District are involved in the cooperative implementation of a comprehensive surface and groundwater management effort. The main thrust of the long-standing Fresno/Clovis Area Recharge Program involves the use of flood control basins for recharge during the summer when they are not needed to control urban storm runoff.

The Fresno Irrigation District, (FID) in a unique long-term partnership with the City of Clovis, has launched a bold exchange project that annually will result in some 10,000 acre feet of "new" water for the area, while helping supply the City's recently constructed surface water treatment plant. The 240-acre Waldron Pond is a water banking facility west of Fresno that will capture excess spring runoff from the Kings and San Joaquin rivers and percolate it into the huge underground reservoir underlying Fresno County. Since Clovis is upstream of the new "bank," it will receive water from FID's Enterprise Canal, while FID pumps an equal amount from the new banking site for surface delivery to Kerman area farmers. The partnership is a model of how cities and irrigation districts can cooperate. With both the Cities of Fresno and Clovis recently completing the construction of surface water treatment plants, there is the potential for similar innovative solutions in other suitable locations.

The Tulare Lake Bed Coordinated Groundwater Management Plan was developed and adopted in May 1995. The Plan encompasses over 250,000 acres. It includes about 246,000 acres of productive agricultural farmland and approximately 4,500 acres of municipal and industrial land. Currently, Plan participants include seven public water districts, the City of Corcoran, and several private landowners. The Plan documents the local groundwater management practices, encourages the importation of surface water from the State Water Project, promotes efficient water practices and conservation programs and acts to preserve local groundwater management.

Current Regional Efforts

Building on these past successes to address surface and groundwater storage, water quality and environmental enhancement, KRCD, the KRWA and other resource entities began to recognize the power of regional coordination. Collaboration across jurisdictional boundaries has many benefits including:

- Avoiding protracted legal battles and loses on both sides.
- Allowing for sharing of financial and technical resources.
- Building relationships.
- Considering all uses of water: agricultural, urban, and environmental.
- Gaining preference from state and federal legislators and administrations.

At this time, a variety of cooperative efforts to preserve our valley's water resources are taking shape. Some of these endeavors include the Upper Kings River Basin Water Forum, the North Fork Conjunctive Management Group, the Kings River Fisheries Management Program, the Southern San Joaquin Valley Water Quality Coalition, the McMullin Recharge Group, and the Fresno County Water Management Group.

The **Upper Kings River Basin Water Forum** (Water Forum) is a multi-stakeholder group. Representatives of local water districts, cities, counties, and other interest groups comprise the Water Forum. It provides the wide array of input and support needed so regional benefits are achieved and priority issues are addressed. Water Forum participants realize that water, land use, and environmental resource issues are interrelated and of regional scope, and that both local and regional solutions are required. This ensures that responses to one issue do not result in undue impacts on other issues. The Water Forum has developed guiding principles as it goes forward with its regional planning. Some of them include:

- Educating and providing awareness to all participants and stakeholders.
- Improving coordination and developing a cooperative process toward resource planning.

- Complementing Kings River water rights.
- Utilizing a voluntary, consensus-driven process.

The Water Forum started through the cooperative efforts of Consolidated, Alta, and Fresno irrigation districts and KRCD. The Basin Advisory Panel was instrumental in obtaining Prop. 13 funds totaling $7.3 million because it was a multi-stakeholder effort. The funding went toward a variety of local projects including:

- FID's Waldron Pond located near the City of Kerman. Waldron Pond is the first groundwater banking facility to be constructed within FID.
- Alta Irrigation District's Harder Pond, a banking program that utilizes flows that Alta hasn't been able to put to beneficial use. It will help recharge the aquifer on the east side that diminishes in dry years.
- The City of Dinuba ponding basin, a recharge pond supplied by local runoff.
- A feasibility study conducted by KRCD of possible sites in which to construct recharge basins in an area of KRCD that does not have surface water supplies and consequently has a severely overdrafted aquifer.

Water Forum participants are developing a Kings Basin Integrated Water Resources Management Plan. The Plan will define projects and programs to manage and develop the surface water and groundwater supplies in a sustainable manner. The Plan will be the result of a collaborative planning process that is intended to plan for the future as well as reduce or avoid conflicts related to the water supply, groundwater management, ecosystem restoration, and water quality. Some of the regional planning objectives of the Water Forum include:

- Compiling an inventory of existing water resource plans and policies for the region.
- Developing an integrated hydrologic model to evaluate water budgets, define basin operations and evaluate alternatives analysis.
- Generating locally based water demand and needs analysis.

Currently the Water Forum is preparing a Prop. 50 Project Grant application to secure funding totaling approximately $32 million for projects that will address the region's groundwater overdraft. The projects identified for funding include:

- Using reclaimed water from the City of Clovis's water reuse facility to irrigate park strips, freeways and landscaping. This is an in-lieu recharge project (meaning that a source of surface water would bee used in lieu of pumping groundwater).
- Using recycled water from the City of Dinuba's water reuse facility to irrigate a municipal golf course. This is an in-lieu recharge project.
- Banking flood waters from the Kings River in a 64-acre ponding basin developed jointly by Fresno Irrigation District and Consolidated Irrigation District.

<u>Member Agencies of the Water Forum</u>

City of Fowler
City of Kingsburg
City of Reedley
City of Sanger
City of Selma
City of Kerman
City of Parlier
City of Clovis
City of Fresno
City of Dinuba
County of Fresno
County of Kings

County of Tulare
Alta Irrigation District
Kings River Conservation District
Consolidated Irrigation District
Fresno Irrigation District
Raisin City Water District
Fresno Audubon Society
California Native Plant Society
Kings River Fisheries Management Program
Public Advisory Group
El Rio Reyes Trust
California Water Institute
Department of Water Resources
Center for Collaborative Policy
California Department of Fish & Game
Regional Water Quality Control Board
Kings River Water Association
URS Corporation

Water agencies from western Fresno and Kings counties have formed the **North Fork Conjunctive Water Management Group** to explore potential projects and conduct studies that can provide benefits for the valley's water supply. Members include Murphy Slough Association, Crescent Canal Company, Stinson Canal and Irrigation Company, KRCD, Burrel Ditch Company, Liberty Canal Company, Laguna Irrigation District, Riverdale Irrigation District and California Department of Water Resources.

A model partnership has been forged between KRCD, the Kings River Water Association and the California Department of Fish and Game to create the much-heralded **Kings River Fisheries Management Program**. Launched in May 1999, the Kings River Fisheries Management Program is a cooperative effort to enhance the broad range of fish and wildlife resources of the Kings River and Pine Flat Reservoir, while protecting the established water rights held by Kings River water users. The program relies heavily on strong public involvement through its Public Advisory Group.

Based on the results from comprehensive research and careful monitoring, KRCD – along with the KRWA and the California Department of Fish & Game (CDFG) – implements a variety of enhancement projects to benefit fish populations while helping to meet the desires of anglers and other outdoors enthusiasts on Pine Flat Reservoir and the river downstream from Pine Flat Dam. The projects are funded by the three agencies They have, in total, jointly made a $2 million commitment to the program over a 10-year period with which to develop numerous fishery enhancement projects in the river.

In addition, the 28 member units of the KRWA voluntarily made available 12 percent of their Kings River water supplies in order to create a temperature control pool of 100,000 acre-feet within Pine Flat Reservoir. The KRWA's member agencies also agreed to make available higher flows of water from the dam at times of the year in which there are no irrigation or flood release demands. The CDFG has termed the Fisheries Management Program "a model" for cooperation in addressing fishery issues.

KRCD has been monitoring the water quality of the Kings River since 1978. However, in recent years, water quality issues and regulations have increasingly become a major focus for California water agencies, including KRCD. The **Southern San Joaquin Valley Water Quality Coalition** was formed for the purpose of jointly and cooperatively addressing water quality issues common to the water and resource agencies in the Tulare Lake Basin watershed. The Coalition's members are working with the Central Valley Regional Water Quality Control Board to implement watershed coalitions on the various river systems to comply with the Conditional Waiver of Agricultural Discharge with a focus on the Tulare Lake Basin watershed as a unique hydrological region separate from the Delta.

The Southern San Joaquin Water Quality Coalition, formed in 2002, serves the Tulare Lake Basin watershed from the San Joaquin River south to Kern County. Members of the Coalition include primary resource management agencies on the Kings, Tule, Kaweah and Kern Rivers that drain into the Tulare Lake Basin. Coalition members are dedicated to protection and preservation of San Joaquin Valley water quality. The Coalition has implemented additional water quality monitoring and collection points at various locations to supplement data that has been collected historically, and has embarked on an extensive public outreach program.

The **McMullin Recharge Group** was formed in 1999 to address the long-term water supply imbalance in the Raisin City area caused by the total lack of surface water available for irrigation. The area is outside of, but adjacent to, the Kings River service area and is irrigated fully utilizing pumped groundwater. Studies are being conducted to locate the best sites for recharge basins in the 148,000-acre project area. Members of the group include the James Irrigation District, Mid-Valley Water District, Raisin City Water District, Tranquillity Irrigation District, KRCD, and Teranova Ranch, Inc.

A newly developed regional effort is in the early stages of forming, the **Fresno County Water Management Group** has developed a work plan and draft MOU between water purveyors, the county, incorporated cites and the building industry to catalog demand and supply and to address cooperative solutions to water supply issues. All of these regional efforts are setting forth the plans and identifying the projects that will be needed to ensure our Valley's future water supply.

Conclusion

Development of storage on the Kings River has provided a multitude of benefits: water for homes, farms and industries; recreation; flood control; hydroelectric power; replenishment of the valley's underground water storage, and for flows for environmental enhancement. The river has developed into an effective project of conjunctively using supplies of surface water and groundwater to create a steady and reliable supply of water and clean affordable power throughout much of the Kings River service area. Such a reliable water supply has fueled the San Joaquin Valley's economic engine while providing tools necessary to implement successful environmental enhancements and maintain water quality. However, water demands and needs within this rapidly growing region are increasing.

Thus, Kings River interests are pressing forward with regional planning that includes additional storage so the Valley has the new supplies of water needed to maintain agriculture, supply the needs of the residents, meet the demands of the business sector and provide fishery enhancement.

In recent years, there has been a change in water storage emphasis on the Kings River, from unsuccessful attempts to develop additional surface water storage to turning toward development of additional groundwater basin storage in order to supplement Pine Flat Reservoir's capacity of one million acre-feet.

This effort has resulted in significant successes although it remains to been seen if groundwater storage, on its own, can meet all needs. Indeed, it has become evident that increasing reliance upon groundwater storage is not necessarily a silver bullet. It comes with limits and constraints—not the least of which involve conveying river water to often distant groundwater recharge percolation or banking basins, and the relatively slow physical rate that water seeps into the ground when compared with the huge flow quantities that rain and snowmelt flood events can generate. There are also increasing concerns in today's resource-conscious environment over the need to make use of costly and frequently short supplies of energy to extract groundwater banked from high surface flows for future use. Finally, as agencies attempting to develop groundwater-

sinking facilities have learned, for a number of reasons not all neighbors are anxious to have a new pond next door.

In the bigger picture, there is no question that reliability of the surface water supply is the key to stabilizing groundwater supplies and maintaining high water quality. Undoubtedly, additional surface and subsurface water storage features will be a benefit to regulate the tremendous variability in flows, which are characteristic of the Kings River. Ultimately, additional surface water supplies will need to be developed to offset the existing groundwater overdraft. Without these continuing efforts, the area served by this river will one day be short of this key ingredient necessary to insure continued prosperity.